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**DEC 08 2004**

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of

Isamu SATO et al.

Group Art Unit: 2652

Application No.: 10/025,694

Examiner: B. Miller

Filed: December 26, 2001

Docket No.: 111588

For: **THIN FILM MAGNETIC HEAD INCLUDING A READING THIN FILM MAGNETIC  
HEAD ELEMENT (AS AMENDED)**

**SUPPLEMENTAL REMARKS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants appreciate the courtesies extended to Applicants' representative during the personal interview held November 30, 2004. The purpose of the interview was to clarify the remarks of the Amendment filed on July 27, 2004. The following incorporates the substance of the interview and constitutes Applicants' separate record thereof.

By the Amendment, Applicants amended claims 1 and 3. New Figs. 1 and 2 were submitted to obviate the objections to the drawings. The title was also amended to clearly indicate the invention to which the claims are directed, thereby obviating the objection to the title. The specification was also amended in accordance with the Examiner's suggestions, thereby obviating the objection to the disclosure.

During the personal interview, Applicants explained the amendments to the drawings, the title, the specification and the claims. As requested by the Examiner, Applicants provided the following remarks specifically directed to the rejections under 35 U.S.C. §112.

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The Office Action rejected claims 1-11 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regards as the invention. More specifically, the Office Action indicated reference to a "high frequency range" in claim 1 to be indefinite.

Reference to a "high frequency range" has been removed from claim 1, thereby rendering this rejection moot. Furthermore, amended claim 1 recites the phrase "to obtain a substantially flat frequency characteristic of gain over a frequency range from 1.0 MHz to 1.0 GHz." Applicants respectfully submit that amended claim 1 satisfies the specific requirements of 35 U.S.C. § 112, second paragraph. Accordingly, withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, is respectfully requested.

The Office Action also rejected claims 1-11 under 35 U.S.C. §112, first paragraph, as failing to provide an adequate written description of the claimed invention. The Office Action asserted that the specification merely sets forth a couple of sample values for the inductance and only one value set for the accompanying series resistor, capacitance and parallel resistor. Furthermore, the Office Action asserted that the indefinite range of frequencies as cited in the claims would encompass an indefinite number of possible value sets.

Independent claim 1 recites, *inter alia*, a set of three equations:

$$\omega_0 = 1/(LC)^{1/2};$$

$$\omega_1 = 1/RC; \text{ and}$$

$$\omega_H = 1/CR_H$$

which satisfy conditions:  $\omega_0 > \omega_1$  and  $\omega_0 > \omega_H$  to obtain a substantially flat frequency characteristic of gain over frequency. Furthermore, independent claim 1 has bounded the claimed frequency range to a "frequency range from 1.0 MHz to 1.0 GHz" thereby further limiting the range of possible value sets. Thus, it is respectfully submitted that one of

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ordinary skill in the art would have been enabled to make and/or use the claimed invention without undue experimentation based upon the specification as originally filed, for example, as disclosed in paragraph [0013].

The Office Action further asserted that without disclosure on the particular size and/or shape of the "microstrip line", it would be extremely difficult for one of ordinary skill in the art to make and/or use the invention without undue experimentation.

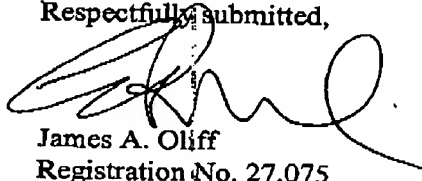
The Applicants respectfully submit that as disclosed in the specification as originally filed, for example in paragraph [0030], one of ordinary skill in the art would know that the inductance of the "microstrip line" is proportional to its length  $d$ , as dictated by the high frequency propagation theory. Therefore, as the impedance characteristics of the magneto-resistive thin film element is dependent upon the specific composition of the thin film element, it would be sufficient for one of ordinary skill in the art to know the inductive characteristics of that composition, in order to determine the proper length  $d$  of that element based upon a required inductance and to satisfy the equations recited in independent claim 1.

Applicants respectfully submit that at least for these reasons, one of ordinary skill in the art would have been enabled to make and/or use the claimed invention without undue experimentation. Accordingly, withdrawal of the rejection is respectfully requested.

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In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 3-11 are earnestly solicited.

Respectfully submitted,



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Date: December 8, 2004

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